



# Royal Birkdale bounces back

by CHRIS BOILING



The £300,000 green rebuilding programme at Royal Birkdale is now complete.

Greenkeeper International went along to have a look and to talk to head greenkeeper Tom O'Brien who's preparing for his retirement after 16 years at the club.

Royal Birkdale is on course to host the 1998 British Open. All the greens, heavily criticised during the '91 Open, have been dug up and remodelled. Five of them – 1, 2, 10, 15 and 17 – opened to much acclaim from members last year and the other 13 are due to come into play this spring.

Interviews for a new head greenkeeper are due to take place later this month. The new man will replace Tom O'Brien when he retires in October. Tom was the one unfairly blamed for the poor state of the greens in 1991. The flak still haunts him...

After spending the afternoon with Tom O'Brien, my mind drifted back to the entertainment at this year's BTME and in particular a line from a Les Miserables tune sung at the banquet dinner by the group West End Nights: *"There's a grief that can't be spoken, there's a pain goes on and on..."*

Tom O'Brien knows that pain. It's been hurting him since the '91 Open when several top golfers (but, interestingly, not the winner) publicly lambasted him for the state of his greens.

Normally, if you've got a pain you see a doctor. But, for Tom, there's no relief for his

suffering. "I've never got over it. I try to put it at the back of my mind but I don't think there's a day that goes by that I don't think on it," he told me.

Tom knows that on a world scale the fact that the greens weren't right for one competition isn't that important. But it doesn't ease the pain. "If you look at what's going on in the world today with the war in Yugoslavia – last night I saw a young girl whose arms had been blown off – and old ladies not feeling safe in their own homes, it doesn't matter. I know

A photograph of a golf course green. In the foreground, a large, well-maintained green is visible. In the middle ground, a red tractor is parked on a dirt path. The background shows a grassy hillside with some trees under a clear blue sky.

# Starting over



you should put things in perspective, but it still doesn't stop me thinking about it. It's still with me, it won't go away.

"The next Open I think I'll want to go away on holiday because it'll come up again, they'll show some photos on the television and they'll repeat all the criticism and bring it all back. I find it difficult to watch golf on telly because I wanted mine to be so nice, to be so good. And I worked damn hard too.

"When you put the effort in and see the results, that's fine. But when the effort goes in and you don't see the results... We all worked hard to get it right and it was a big disappointment to us all."

Tom has been at the Southport course for 16 years and a head greenkeeper since he was 23. He joined the profession 49 years ago when he went to his local club for a job. He stayed at Glasgow's Mount Ellen course for 17 years working his way up to head greenkeeper. Spells in France, Menorca and other courses in his native Scotland followed.

He knew things weren't going right at Birkdale as the '91 season unfolded. Various agronomists came in to advise him, including Jim Arthur and David Stansfield. He says he followed their advice "to the letter". And, at first, he thought they were right. "In the beginning the impression I formed was that if I tined, tined, tined, tined and cut down on the fertiliser that I would win the greens

round. No way! When we dug them up we realised that was the only answer."

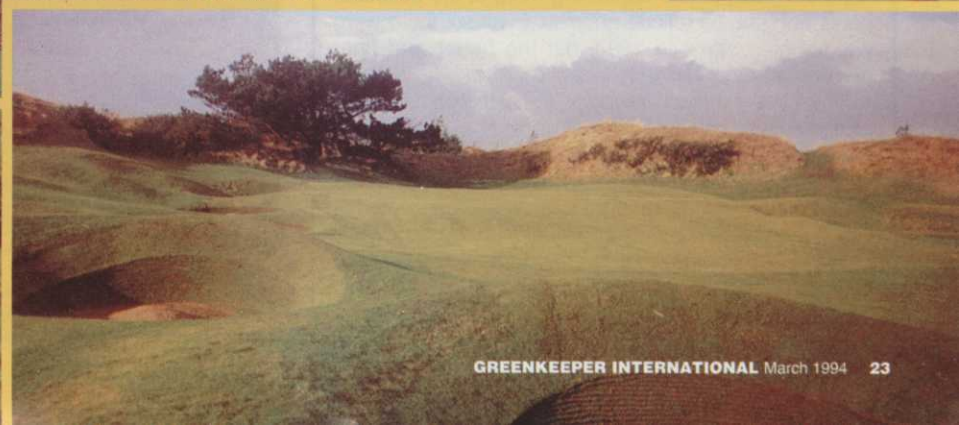
Now he is disillusioned with agronomists, except Jeff Perris, the STRI's advisor on the new greens.

"One agronomist came and said 'the greens need tining' – the green he was standing on had been vertidraind nine times. One says don't mention lime, another says put it on. One says sand causes root break, the other says it doesn't." But he followed what they said.

"All this advice, all those agronomists, people considered authorities, but when it all goes wrong it's the greenkeeper's fault 110 percent."



**Main picture: the 5th green, with rootzone layer**  
**Left: the stage before – digging it up**  
**Below: how it looks today, with the green finished and bunkers remodelled**





# Major success

ROYAL BIRKDALE started by replacing what Jeff Perris of the STRI calls "the most troublesome and the worst examples of an inhospitable and most inappropriate growing medium in which the grass was expected to thrive and present a good playing surface."

"This inhospitable growing medium comprised a very organic, moisture-retentive, fine, sandy medium which was reluctant to support a good quality, well-rooted sward."

So the decision was made to reconstruct the greens, replacing the inhospitable rootzone with a better material and at the same time taking the opportunity to redesign and recontour the greens where it was felt appropriate.

Work on the first five greens started in September 1992 and was completed by late October. These greens opened for play last spring. The reconstruction work and redesign was considered so successful that the club decided quite quickly that the remaining greens and the practice putting green should be done in 1993. Work started in late August and finished a few days before Christmas. The weather will dictate when they open in spring.

The same team has been involved in the work from the outset: Martin Hawtree (assisted by Ken Moodie) did the redesign while the technicalities were sorted out by the Sports Turf Research Institute (whose principle agronomists involved were Jeff Perris and James Westwood); John Greasley Ltd was the golf course contractor.

The reconstruction programme to the new designs went like this:

1. The turf was cut thinly and removed and stored on adjacent areas to the green and surrounds.
2. The layer of inhospitable, undesirable organic soil which often prevailed to a depth of about 5in was removed and disposed of.
3. The underlying 4in or so of more suitable sandy soil was removed and stockpiled.
4. The exposed underlying pure sand was then reshaped. Where additional material was needed a local Southport sand was imported (very similar to the natural Birkdale sand).
5. The stockpiled sandy soil taken from the green was then mixed with a specific imported medium-fine sand (often in the ratio of equal amounts by volume) and the resultant mixture replaced on the greens to provide the actual rootzone.
6. A proper turf bed was prepared and any necessary fertilising undertaken prior to replacement of the original turf. The STRI hopes that the more suitable growing medium on the greens will eventually improve the original quality of the annual meadow grass Birkdale turf to eventually include some bentgrass and maybe even fescue.

During the 1993 growing season the management of the first five greens took a little getting used to, according to Jeff Perris, the much sandier and freer rootzone clearly needs a little more fertilising and irrigation. "Hopefully, with the experience of 1993 behind us, it will prove possible to make significant improvements to the greens this year and in the coming years. It will, however, take some time to amend the turf from annual meadow grass to one containing more of the desirable bents and maybe fescue grasses. Even so, there were encouraging signs in 1993 that the better and finer grasses were beginning to establish.

"From the technical viewpoint, the club has been fully justified in remaking the greens and replacing the inhospitable, inappropriate black organic rootzone with a medium-fine sandy soil that most connoisseurs of true links courses would recognise as the ideal material. Whilst there was some slight variation in the sandy soil preserved from each green for further mixing with imported sand, the resultant mix shows a remarkable consistency."



The 6th before, during and after.  
Top picture shows the way it used to be.  
The middle picture shows returfing in progress following the remodelling of the green.  
The third picture shows the finished green before the right hand bunker was remodelled. Far right: the freshly returfed right-hand bunkers.



# comes just a little too late

He would probably have got away with the greens being soft and slow, except for one big mistake...

"I had been called to the office about the greens dropping in pace from 9 to 6 and they asked 'What can you do about it?' Well, what can you do about it when a tournament starts?"

"They asked 'What can you do to increase the pace?' I couldn't put the machines down because the greens were soft. I knew that. I said the only thing I can do is put the grimmers down a 1/16th and it might increase the speed. All the lads knew I'd been called to the office, they knew what had been discussed. They knew the greens were slow, they knew we were going to put the grimmers down, so I think they went out and thought this is right, this is what he wants. But, of course, it wasn't"

Instead of 1/16th, the grimmers had been put down to a 1/4.

"The words I used were '1/16th, just a 1/16th, just enough to kiss the grass.'" The words are etched on his mind, along with the thought: "If only I'd looked, if only I'd checked."

But, with everything going on, with meetings about scaffolding and TV towers to attend, he never did get around to checking the machines. An oversight that has devastated him.

"I'm the head greenkeeper, I must take the blame," he says.

The severe drop in mowing height killed much of the annual meadow grass which dominates this 105-year-old course's greens so – sin of all sins – they didn't look good on TV. "Imagine the armchair viewer listening to all the criticism. If he sees them looking nice and green and striped, he says 'I don't know what they're moaning about.' But if he sees them all discoloured, he says 'Well, they're right enough, something's wrong there.'"

Although Tom accepts responsibility for not checking the grimmers, this was not the problem, it just highlighted it. As Tom says: "They didn't spend a lot of money digging up 18 greens because I cut them too short."

"Immediately after the Open I'd have looked quite smart if I'd stood up and said 'It wasn't my fault, we adjusted the machines wrong' or something. But that wasn't the issue. That let the agronomists off the hook. What was really the issue was the greens were too soft. I know that, they were too soft. But I also came in for a lot of criticism that wasn't justified. I thought at the time the course was also too much for some of the pros. If someone came up to you during the Open and you weren't playing well and asked you what you thought of the course, what're you going to say? There were also some comments from them that they were thatchy, they were this and they were that. I'm not trying to be funny or smart but do you think they'd be interested in a golf lesson from me?"

Apart from the greens, the course was in

good condition but, as Tom points out, "You can't have a good golf course if it doesn't have good greens."

Now, as the Royal Birkdale Golf Club prepares to host its eighth Open Championship before the turn of the century, it has the greens to match. "We've got the best layout and now we've got the best greens," says club secretary Norman Crewe.

## Time for a change

"Immediately after the Open we started to think what could we do to get them right," says Tom. They'd tried most things in the build-up to the Open but nothing had worked. Then, when the £300,000 greens renovation programme began, they realised why.

"When we dug them up they were worse than we thought," explained Tom. There was a black layer about five inches thick and three of the greens had a clay base. "You could see all the tine marks in them, but they'd done nothing. It was like slicing or vertidrainage into tablet."



Newly revetted bunkers on the 6th. "Tom's a master at revetting," says club secretary Norman Crewe

Because Southport sand is very fine, the early contractors had mixed it with agricultural soil "which seemed to be the popular thing then – there was mushroom compost and all sorts of things in it," says Tom. Over the years this completely sealed the soil to form a solidified humus with the consistency of plasticine. "Once the operation had started, everyone realised it was the sensible thing to do and it should have been done a long time ago."

For a long time there had been a joke about selling Royal Birkdale's greens for fertiliser. It seems they could also have been sold as breeze blocks.

## Tougher greens

While they were digging up the greens, designer Martin Hawtree, whose grandfather Fred designed the present layout in 1932 (when it became a championship standard course) and whose father Fred Jnr laid out the new holes when the course was modified after the 1961 Open, took the opportunity to remodel them.

"We were looking to improve water surface run-off, to increase putting surface interest, and to harmonise green and green surround,

all of these matters to be attended to in the context of championship golf – neither making the approach to greens any easier or more receptive than they have been, nor eliminating the deceptive breaks and slopes in the present putting surfaces, nor making distances from fairway to green any easier to judge," Martin says was his brief.

Tom reckons the new greens will add two to three strokes to an average golfer's round.

Three of the greens – 3, 7 and 18 – have had major facelifts since they have been raised by 0.25-0.5m for drainage and salinity reasons. This means the bunkers on the 7th have become much deeper. The 3rd was also extended by four metres at the front to increase pin placement options.

Commenting on the new greens, Jeff Perris, of the STRI, says visitors will "note a tremendous change in the architecture of the greens as well as the firmness of the surface. The anticipated improvement in textural composition of the turf will no doubt take a little longer to achieve but already the redevelopment is being claimed a major success."

This "major success" has come a little late in the day for Tom O'Brien. "At least I have one season with them. It would have been worse if I'd have finished at the time of the Open, which I gave serious thought to. But I was unhappy going into the Open. Very, very, very unhappy. The greens weren't going right and there was no way I could correct it."

If you were preparing for the 1998 Open what would you do different, I wondered. "I wouldn't change my methods, but now I've got new greens the results would be different. I'd do the usual maintenance. Obviously I'd want to see it look its best. I'd think twice about some of the advice I got, that's for sure."

## Life after Birkdale

Tom is uncertain about what life after Birkdale has to offer. When I asked him what he'd like to do when he retires, he said: "God knows, I'd like to get something part-time. I don't want to sit around doing nothing." (His wife won't be retiring just yet.)

He's told some people he might return to Scotland, but he told me: "I don't think I'll move back. I've been really happy here. Southport is a great place to live."

He used to play a lot of golf, getting down to a nine handicap although it was "18 at the last count, 81 now". He may take it up again in his retirement. "I'd like to become a member of a club but it's difficult to get in," says the father of two grown-up sons.

Whatever he does, he'll never forget the '91 Open. The only thing that might erase that nightmare is hosting a successful Championship. But that responsibility will fall to one of the 60 applicants who applied for his job. Tom will have to content himself with the next best thing – the North West section are holding their autumn tournament there in September.





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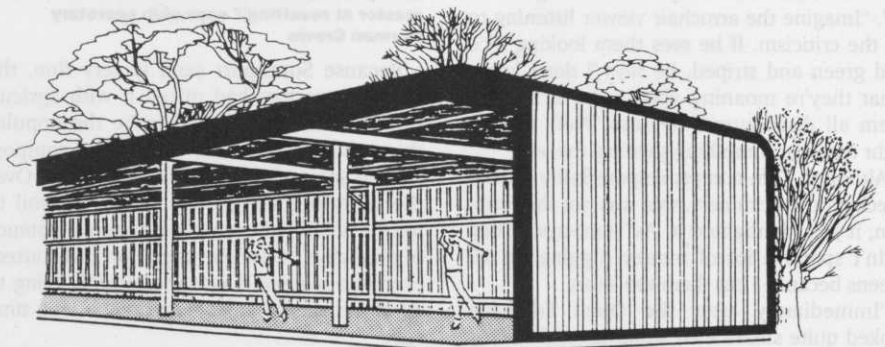
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# Taking control

## Irrigation consultant Philip York looks at irrigation controllers and control systems.

There is now a plethora of irrigation controllers on the market utilising either conventional electrical control or electronic encoder/decoder systems.

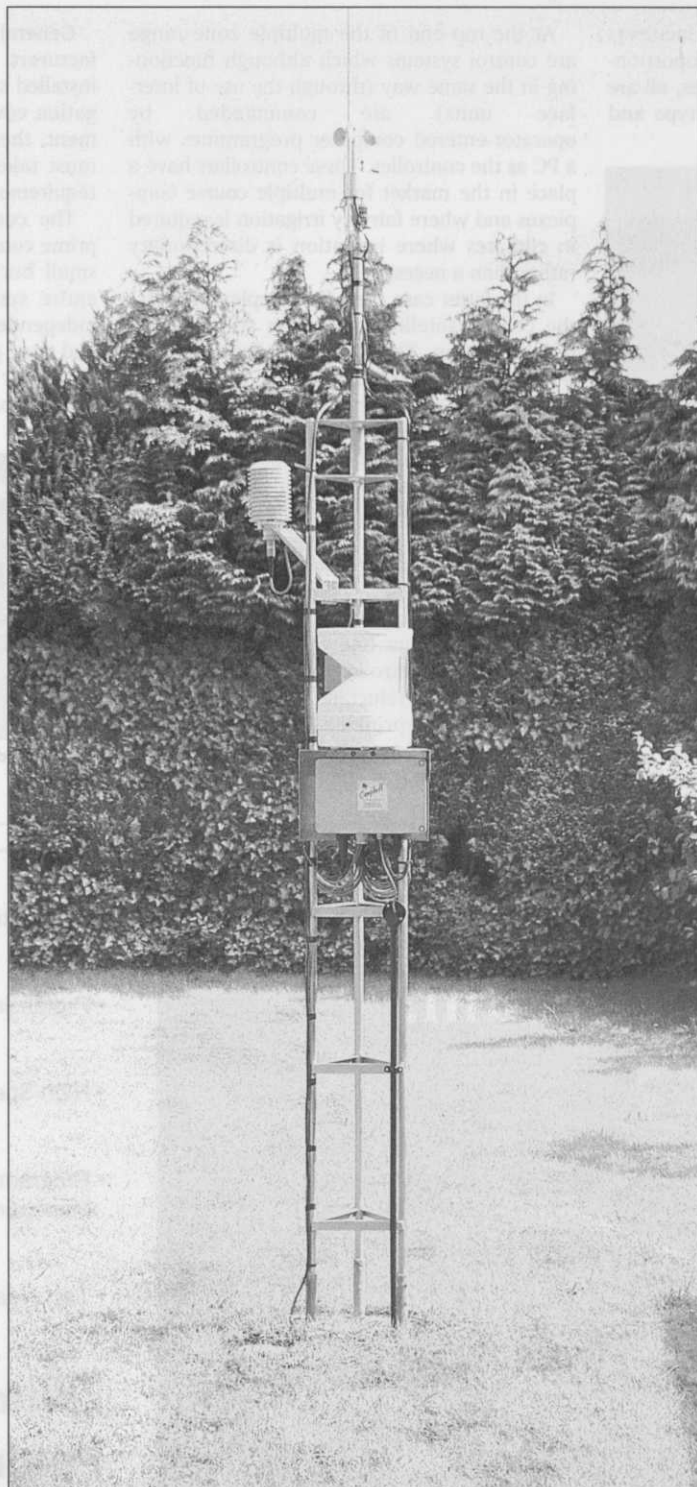
Whereas a little more than ten years ago virtually all controllers were of US origin from the major sprinkler manufacturers, and provided similar functions; today's range is much greater, the major sprinkler manufacturers have significantly increased their range and types of control systems on offer, added to which there are a number of manufacturers in the European Community who may, or may not, have other interests in the irrigation market.

Although the traditional type of controller still has its place in the market for the smaller landscape type systems, for the most part those controllers employed in golf have, to a greater or lesser extent, incorporated electronics with varying degrees of flexibility and sophistication.

Nowadays most of the controllers are electronic and operate the solenoids by sending an encoded signal to decoders located at the valves, this system enables the entire scheme to be controlled from one cable with 2 or 3 cores whereas the older electro-mechanical controller requires a minimum of a common wire to all valves and one cable to each valve.

The simplest form of controller is a single zone unit controlling a number of stations in sequence for operator set times, these can only be used where the total operating time to apply the required amount of water at each location is within the period of time allocated to complete the cycle, normally 10 hours, typically therefore being utilised where only 18 greens and tees require irrigation.

These single zone units will have varying degrees of flexibility,



The Toro Weatherstation for connection to the Toro HW8000 and LTC computer controller

Picture courtesy of Toro

eg 24 hour, 7 or 14 day time clocks, with 4 or more start times per day, station timing will be typically from 0-30 minutes (or more) in small or large increments, some will incorporate the provision to operate alternative pre-selected programmes eg greens only, tees only or greens and tees.

If the scope of the irrigation sys-

tem is larger, either incorporating additional areas, or maybe 27 or 36 holes, then, as there will be insufficient time to accomplish the irrigation programme, the number of zones will require to be increased in order that two or more stations can be operated independently but concurrently. The range of controllers in the market widens considerably with

## IRRIGATION INFORMATION

■ Got a problem? Talk to the British Turf & Landscape Irrigation Association (BTLIA). "Anybody contemplating investing large sums in irrigation should, if they have doubts about design specifications or cost factors, talk to us," says BTLIA chairman Paul de Rham. "We are actively concerned that customers should obtain value for their money. That's why the Association's members drew up a detailed list of design and installation standards some years ago." If you would like a second opinion or advice, contact Paul through John Shildrick at the Association's Bingley office. Tel: 0535 273188.

■ Childwall Golf Club in Liverpool is using the clarified water overflow from the local sewage works, purifying it, then storing it in its irrigation holding tank.

■ Myerscough College in Bilsborrow, Preston, is running a turf irrigation course, starting April 11. The course runs over four separate week-long modules and the college says: "Many course attenders find they can quickly recoup the course fees as a result of subsequent maintenance, water and energy savings." Furthermore, completion of the course gains 'unit credits' towards the BIGGA Master Greenkeepers Certificate. For further details call David Halford on 0995 640611.

■ Clubs using a non-Toro system are being invited to replace old sprinklers around a green with examples of the latest Toro 700 Series pop-ups - free of charge. This offer from TIL Irrigation of Ringwood is limited to the first 50 applying. Tel: 0425 476261.

■ Hunter's UK and Ireland importers, Sports Ground Irrigation Co, are warning potential buyers that they will only honour five-year warranties if the goods were bought from an authorised dealer or installer. A list of these is available from the Market Harborough-based company, tel: 0858 463153.



# Taking control

multi-zone controllers. Most manufacturers are offering them and they have proportionately more in-built or optional features, all are of the electronic encoder/decoder type and the price varies significantly.



**A Watermation TW2 4-zone controller with remote radio activation**  
Picture courtesy of Watermation

At the top end of the multiple zone range are control systems which although functioning in the same way (through the use of interface units) are commanded by operator-entered computer programmes with a PC as the controller. These controllers have a place in the market for multiple course complexes and where fairway irrigation is required in climates where irrigation is discretionary rather than a necessity.

In the latter case (and for complex projects) the central/satellite concept is still the preferred solution. These range in sophistication from electro-mechanical systems easily understood and maintained through to computer run systems linked to a weather station with electronic satellites which can be programmed from the central, or in the field, and with two way communication and many optional features.

It is important to understand the way the UK market (and some EC countries) is structured, contractors being allied to one particular manufacturer's product line may not be able to offer the right controller for the project; similarly the trade is reluctant to incorporate one manufacturer's sprinklers and valves with another's controller, although technically this can be done, and is in some cases.

Generally, sprinklers from reputable manufacturers with a properly designed and installed system will provide the accurate irrigation coverage required by today's management, therefore the choice of control system must take greater priority in evaluating the requirements of the project.

The cost of a controller should not be a prime consideration as it is only one relatively small but very important component of the entire system, what it must do is offer the independent designer and the operator flexible and easy programming with the features necessary for the technical aspects of the project at the appropriate management levels.



**A Rainbird Master II multizone controller with printer**  
Picture courtesy of Wright Rain Ltd

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# The write approach

**What do you do when you need a new watering system but the club says it can't afford it? That was the problem facing 29-year-old Alastair Cale when he joined Ifield Golf and Country Club last year as head greenkeeper after five years as assistant at another Sussex course, Ham Manor.**

When I arrived here, it was clear that the watering system had been causing problems for some time. It was based on a triangular system of three pop-ups per green and the coverage they were giving was very poor. Also, the pump wasn't producing the right pressure. There was almost no tee watering – what there was had been cannibalised to keep the greens going – and no approach watering either.

As the season unrolled, the watering system was giving me more and more problems, so it was obvious that something needed to be done. What had happened in the past, according to the committee, was that they'd only ever been given quotes for a brand new system. Now it doesn't take a genius to work out what a club with very tight financial restraints will say when told that they need to spend £65,000-£70,000 on a complete new watering system. The quotes basically went to the committee who said they can't afford it and the idea went out the window.

I took the experience I gained at Ham Manor where we had the same sort of problems with an inadequate watering system, but what we did there was put a proposal forward to phase in the system over a number of years with the main priority being the greens.

So I set about doing my own report, which the committee seemed quite receptive to. One of the greens committee members is an engineer, so he understood the principles of hydraulics, pumping and pressure. So the two of us set about writing a report on the failings of our watering system and the route we should take in upgrading it – but very much based on the idea of phasing it in over a period of time.

To compile the report we got a couple of the leading irrigation companies to come and give us

their opinions of our watering system and to brief the committee member about irrigation systems in general. We also went down to Ham Manor, so I could show the committee member what we'd done and he talked to the secretary. I also asked a lot of greenkeepers I knew in the area who had parkland courses what sort of pop-ups they were using (impact or gear driven?). I got demonstrations on different types of pop-ups and over a period of about three months we began to form the basis of the report.

The report contains:

1. An introduction
2. Observations on the current system, pointing out the poor coverage, poor pumping, the fact that our water storage tank, although it has a few small leaks and should ideally be larger, should cope for the foreseeable future. The control system was very old and the wires kept breaking down and this gave me a lot of grief during the summer – it got to the stage where I had to go out every night and turn it on manually because I couldn't trust it to come on on its own. It highlighted the poor piping round the greens and the spurs and it basically set out what was right and wrong with our system. One point was: "The greens staff have spent 100 hours between March and August repairing faults in the irrigation system. This time would be better spent on other jobs around the course."

3. Ideal system objectives. This looked at the pumping capacity we'd need, the amount of pop-ups we'd need around the greens, the ideal ring main size, and said that tees and approaches should be incorporated.

4. Proposed approach. We looked at our pumping system. We had a spare pump and we found we could install that in parallel with our existing pump. We had the pump serviced and installed to increase the flow rate as well as the pressure. Then we looked at the control system. A new control system would need a complete new cabling network. This was a priority so it came in in phase 1. Also proposed for phase 1 were the eight first priority greens. More greens would be done in phase 2 while phase 3 included

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# 'We'd gone about it in a way the club could afford'

the rest of the greens, approaches and tees. It was decided that a new ring main was not urgent.

We got one of the main companies to give us a rough breakdown of prices so we could put approximate costs alongside these jobs.

5. Suggested programme of implementation. This showed clearly how the system would be phased in over three years and how much it would cost each year.

6/7. The easy-to-read report also had some interesting facts about watering systems and a proposed priority of greens.

8. There was also a table showing the current spacing of the pop-ups around greens. This varied from 17 to 26 yards (the recommended maximum being 18).

We presented the ten-page report to the committee and it went through without any problems because we'd gone about it in a way that the club could afford. I knew from the start the club couldn't afford a complete new system and if I kept pushing for that I would not get a thing.

It was decided we would do 12 greens this year, the remainder and a few tees next year, and the following year we'd finish off the tees and do the approaches. We'd do the cabling this year; we've already put our pump in so we've got the pressure and the flow rate to cope with the extra sprinklers on the greens. We've also decided to split-valve the greens, so two of the four pop-ups come up at a time (we're restricted by a 2in ring main).

## Spending the money

Once I'd got the money approved,



Alastair Cale in his 'pump room'

I had to decide what to spend it on. The main choice was whether I went impact drive or gear driven for the greens. There's a big debate raging about that. I was a confirmed impact man but I decided I must look at everything from an objective point of view. So I got demonstrations of both, I asked around – both greenkeepers and installation companies. And here gear-driven models had the edge.

I still hadn't made up my mind when I went on holiday to South Africa where I played a lot of golf. They'd all got gear-driven systems. And a company I'd only heard about over here recently – Hunter – I saw in action at the Royal Cape Golf Club. I had a long chat with the course manager and he told me they gave a full five-year warranty, which

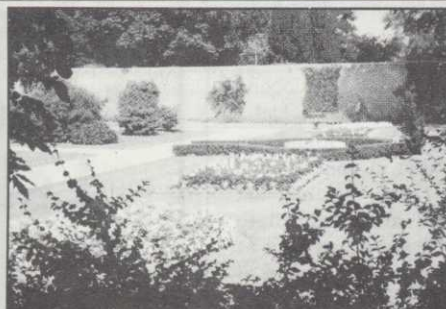
began to sway me because one of my initial concerns about gear-driven systems was that some people had said the gears wear out after a couple of years. Well, perhaps the early ones did.

I came back from my holiday and did a bit more research on the Hunters, on the warranties they give and so on, and this is the route I went down.

The other big debate was controllers. I decided to get four of the leading companies in – Toro, Wright Rain, Watermation, and Prime Watermen and a small local installer, Flanderblade, who was recommended by a ex-head greenkeeper. I got them to quote for roughly the same thing, but I asked them to go out on the course and send me a report and diagrams. I said I was looking at Hunter sprinklers, but I'd also like

a quote on the impacts as well. So, apart from Toro, they were all quoting for both. When the reports came in they were all completely different. Some were recommending 1 1/4in pipe round the greens, some were recommending 1/2in. Some were recommending five sprinklers on one green, some were recommending four. Obviously they all recommended their own controllers, except for the independent guy who said he would install whatever I wanted.

So I asked other greenkeepers what they had and set out my own spec and got the companies whose specs differed to re-quote. So now everyone was quoting on the same thing. But there was a difference in price of nearly £6,000 – from £19,000 from one of the 'big' companies to around



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